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NEWS 1		Web Page URLs for STN Seminar Schedule - N. America
NEWS 2		"Ask CAS" for self-help around the clock
NEWS 3	AUG 09	INSPEC enhanced with 1898-1968 archive
NEWS 4	AUG 28	ADISCTI Reloaded and Enhanced
NEWS 5	AUG 30	CA(SM)/CAplus(SM) Austrian patent law changes
NEWS 6	SEP 21	CA/CAplus fields enhanced with simultaneous left and right truncation
NEWS 7	SEP 25	CA(SM)/CAplus(SM) display of CA Lexicon enhanced
NEWS 8	SEP 25	CAS REGISTRY(SM) no longer includes Concord 3D coordinates
NEWS 9	SEP 25	CAS REGISTRY(SM) updated with amino acid codes for pyrrolysine
NEWS 10	SEP 28	CEABA-VTB classification code fields reloaded with new classification scheme
NEWS 11	OCT 19	LOGOFF HOLD duration extended to 120 minutes
NEWS 12	OCT 19	E-mail format enhanced
NEWS 13	OCT 23	Option to turn off MARPAT highlighting enhancements available
NEWS 14	OCT 23	CAS Registry Number crossover limit increased to 300,000 in multiple databases
NEWS 15	OCT 23	The Derwent World Patents Index suite of databases on STN has been enhanced and reloaded
NEWS 16	OCT 30	CHEMLIST enhanced with new search and display field
NEWS 17	NOV 03	JAPIO enhanced with IPC 8 features and functionality
NEWS 18	NOV 10	CA/CAplus F-Term thesaurus enhanced
NEWS 19	NOV 10	STN Express with Discover! free maintenance release Version 8.01c now available
NEWS 20	NOV 20	CAS Registry Number crossover limit increased to 300,000 in additional databases
NEWS 21	NOV 20	CA/CAplus to MARPAT accession number crossover limit increased to 50,000
NEWS 22	DEC 01	CAS REGISTRY updated with new ambiguity codes
NEWS 23	DEC 11	CAS REGISTRY chemical nomenclature enhanced
NEWS 24	DEC 14	WPIDS/WPINDEX/WPIX manual codes updated
NEWS 25	DEC 14	GBFULL and FRFULL enhanced with IPC 8 features and functionality
NEWS 26	DEC 18	CA/CAplus pre-1967 chemical substance index entries enhanced with preparation role
NEWS 27	DEC 18	CA/CAplus patent kind codes updated
NEWS 28	DEC 18	MARPAT to CA/CAplus accession number crossover limit increased to 50,000
NEWS 29	DEC 18	MEDLINE updated in preparation for 2007 reload
NEWS 30	DEC 27	CA/CAplus enhanced with more pre-1907 records

NEWS EXPRESS NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.

NEWS HOURS	STN Operating Hours Plus Help Desk Availability
NEWS LOGIN	Welcome Banner and News Items
NEWS IPC8	For general information regarding STN implementation of IPC 8

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 NEWS X25      X.25 communication option no longer available

Enter NEWS followed by the item number or name to see news on that
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FILE 'HOME' ENTERED AT 11:37:30 ON 08 JAN 2007

=> file biotechds, caplus, embase, medline, biosis, scisearch
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.21       0.21

FILES 'BIOTECHDS, CAPLUS, EMBASE, MEDLINE, BIOSIS, SCISEARCH'
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6 FILES IN THE FILE LIST

=> s concentrat? (5a) (macromolecule or agglomerate or molecule or particle)
L1       65927 CONCENTRAT? (5A) (MACROMOLECULE OR AGGLOMERATE OR MOLECULE OR
               PARTICLE)

=>  s l2 and (stabili (5a) dispersion)
(5A) IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s l2 and (stabili? (5a) dispersion)
L2 NOT FOUND
The L-number entered could not be found.  To see the definition
of L-numbers, enter DISPLAY HISTORY at an arrow prompt (=>).

=> s l1 and (stabili? (5a) dispersion)
L2         404 L1 AND (STABILI? (5A) DISPERSION)

=> s l2 and (interface layer)
L3           0 L2 AND (INTERFACE LAYER)

=> s l2 and (interface or phase-partition? or two-phase)
L4           5 L2 AND (INTERFACE OR PHASE-PARTITION? OR TWO-PHASE)

=> d ibib abs l4 1-5

L4   ANSWER 1 OF 5  CAPLUS  COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER:        2001:649033  CAPLUS
DOCUMENT NUMBER:         136:406700
TITLE:                   Stability of amorphous indomethacin compounded with
                         silica
AUTHOR(S):               Watanabe, T.; Wakiyama, N.; Usui, F.; Ikeda, M.;
                         Isobe, T.; Senna, M.
CORPORATE SOURCE:        Product Development Laboratories, Sankyo Co., Ltd.,
                         Shinagawa-ku, Tokyo, 140-8710, Japan
SOURCE:                  International Journal of Pharmaceutics (2001),
                         226(1-2), 81-91
                         CODEN: IJPHDE; ISSN: 0378-5173
```

PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The stability of indomethacin (IM) compounded with SiO2 either by co-grinding or by melt-quenching was examined by recrystn. kinetics under the conditions 30° and 11% relative humidity. A decrease of the recrystn. rate with and without an appreciable induction period was observed in both compds. Higher stability of amorphous IM compounded with SiO2 was attained by prolonged co-grinding than by melt-quenching. This was explained by the stronger chemical interaction at the interface between IM and SiO2 by co-grinding, as revealed by 29Si and 13C solid state NMR. Incomplete co-grinding with the rest of the crystalline state, however, made the amorphous state appreciably unstable, since the remaining crystallites serve as seeds for recrystn.
REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1997:613036 CAPLUS
DOCUMENT NUMBER: 127:267576
TITLE: Relationship between biogeochemical features of biogenic elements and flocculation in the Changjiang Estuary
AUTHOR(S): Lin, Yi'an; Tang, Renyou; Li, Yan; Dong, Henglin; Guan, Xuwei; Chen, Yinzu
CORPORATE SOURCE: Second Institute of Oceanography, State Oceanic Administration, Hangzhou, 310012, Peop. Rep. China
SOURCE: Acta Oceanologica Sinica (1995), 14(2), 225-234
CODEN: AOSIEE; ISSN: 0253-505X
PUBLISHER: China Ocean Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB This paper reports the relationship between the biogeochem. characteristics of C, N, P, and flocculation and settling of suspended materials in the Changjiang Estuary. Regional activities of bacteria and the plankton and biogeochem. processes at the water-particle interface under some environmental conditions are quite variable. This leads to the transition of material phase with speciation variation of elements (C, N, P) in the transfer processes. Therefore, the composition and reactivity of particle surface and dissolved constituent are modified, affecting the stability of the particulate dispersion system. In summer, the concentration of NO3- and PO43- are pos. correlated with turbidity, while the weight percentage of PON, POC and PP are neg. correlated with turbidity. When particles in the river move seaward, two zones can be distinguished, (1) zone with maximum flocculation speed, in salinity 0.1-2.0; (2) zone with huge coagulating particles netting and high turbidity at the bottom, in salinity 2-11. The highest values of C/N in particles (or the low valley of C. E. C. of particle surface) appear in the two zones. These results demonstrate that the biogeochem. action is one of the major factors and mechanisms to dominate the flocculation of particles in the Changjiang Estuary.
REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1976:526806 CAPLUS
DOCUMENT NUMBER: 85:126806
TITLE: Hydrotransport of the high-resin petroleum of some Uzbekistanian deposits
AUTHOR(S): Gubin, V. E.; Mukuk, K. V.; Kallagov, A. I.; Galin, F. M.; Emkov, A. A.
CORPORATE SOURCE: Sredneaziat. Nauchno-Issled. Proektn. Inst. Neft. Prom., Tashkent, USSR

SOURCE: Neftepromyslovoe Delo (1963-1980) (1976), (3), 18-20
CODEN: NDTSA9; ISSN: 0470-6234
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB The high-tar petroleum for the Koshtar field in Uzbekistan is produced in relatively small amts. which do not justify pipeline pumping at fast rates, and there are no adjacent deposits of low-viscosity petroleums for blending. A preliminary study evaluating their pipeline transport as emulsions with weakly-mineralized stratal waters of the same fields is reported. The Koshtar petroleum (d. 0.959) solidifies at 26°; it has a plastic viscosity at 20° of 38.7 P and shear stress of 1225. It tends to form stable emulsions, the stability of which increases with the rate of mixing and with the water content up to a petroleum-water phase ratio of 0.2. For pipeline transport of the Koshtar petroleum, the amount of water added should either be <10% or >40%. The effects of various additives on the stability of emulsions containing 30% of the petroleum in stratal waters and on the surface tension at the petroleum-water interface are tabulated. The presence of surfactants such as Disolvan 4411 [12676-40-3], R-11, Visco K-3-E, or sulfonol NP-3 did not lower the stability of emulsions. The presence of water-soluble polyelectrolytes did lower the stability, while increasing the dispersion of water globules in the oil phase and increasing flocculation. The least stable emulsions, suitable for pipeline transport, with hydrophilicity towards the internal surface of the pipeline, were obtained with a composition of Disolvan 4411 (50 g/ton) and the K-4 (hydrolyzed polyacrylonitrile) [9038-24-8] (10 g/ton); or a composition of OS-20 (hydroxyethylated alc.) [11099-04-0] (1 g/ton), hexametaphosphate (6 g/ton), and CM-cellulose [9004-32-4] (3 g/ton). It is recommended to flush the pipeline, prior to pumping the petroleum emulsion, with an aqueous solution of one of these compns. for a wetting contact of ≥25 min.

L4 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1975:64764 CAPLUS
DOCUMENT NUMBER: 82:64764
TITLE: Microemulsions
AUTHOR(S): Rosano, Henri L.
CORPORATE SOURCE: City Coll., City Univ. New York, New York, NY, USA
SOURCE: Journal of the Society of Cosmetic Chemists (1974), 25(11), 609-19
CODEN: JSCCA5; ISSN: 0037-9832
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Microemulsions are highly stable transparent emulsions. The droplet diams. are <1400 Å (<11/4 wavelength of incident light). The effect of surfactants and cosurfactants on the interfacial tension γi between water and oil layers was examined Data are given for H2O-hexadecane and H2O-C6H6 microemulsions. Strong interactions between surfactant and cosurfactant mols. are not necessary for microemulsions formation. The dynamic effect of the cosurfactant in lowering γi by transport through the oil/water interface was examined When 1-pentanol was injected, less was required to reduce γi to 0 when it was injected into the hexadecane layer. Fluctuations in γi are considered. There are 2 parts in the process of microemulsion formation, dispersion and stabilization. Film penetration, interfacial complexing, interfacial tension, etc., should be considered, also considering redistribution of amphiphatic mols. among the phases. If enough surfactant and cosurfactant are present in the right proportions, the equilibrium γi could be 0, which would imply a spontaneous dispersion. A phase diagram is given for water-hexadecane-1-hexanol with 0.2-0.4 M K oleate as surfactant. A theory of microemulsion formation by interfacial diffusion is given.

L4 ANSWER 5 OF 5 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 1998:497293 SCISEARCH
THE GENUINE ARTICLE: ZW986
TITLE: A study of the influence of pH on structurization of concentrated collagen dispersions
AUTHOR: Kurskaya E A (Reprint); Podorozhko E A; Andreeva L M
CORPORATE SOURCE: Russian Acad Sci, Inst Organoelement Cpds, Ul Vavilova 28, Moscow 117813, Russia (Reprint); Russian Acad Sci, Inst Organoelement Cpds, Moscow 117813, Russia
COUNTRY OF AUTHOR: Russia
SOURCE: COLLOID JOURNAL, (MAY-JUN 1998) Vol. 60, No. 3, pp. 338-346.
ISSN: 1061-933X.
PUBLISHER: MAIK NAUKA/INTERPERIODICA, C/O KLUWER ACADEMIC-PLENUM PUBLISHERS, 233 SPRING ST, NEW YORK, NY 10013-1578 USA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 28
ENTRY DATE: Entered STN: 1998
Last Updated on STN: 1998

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Structurization of collagen dispersions (6-25%) prepared from limed cattle skin during swelling in dilute solutions of mineral acids and alkalis (0.05-0.10 M) with a limited solvent content in the disperse system was studied. It was found that the extensive polyelectrolyte swelling (pH ranges 1.5-3.5 and 11.8-12.5) resulted in an enhanced macrohomogeneity of the system that exhibited an increase in the mutual entanglement of the swollen particles, diminishing of the visible interface between the particles, and in an improved stability of the. disperse system. Morphological changes in the particles increase the quantity of nonpolar groups capable, under favorable conditions, of hydrophobic interactions. The studies on the stability of dispersion in various aqueous solvents and the rheological properties of the structured samples showed that the optimal conditions for the formation of elastic gels are provided by this set of parameters (the dispersed phase concentration, pH and ionic composition of the dispersion medium) at which no free solvent is present in the system. It was established that the stabilization of the structured samples is attained by a decrease in the excess net charge of similar sign carried by the collagen particles. The gels formed from dispersions swollen in:a strongly alkaline medium (pH > 12.2) were stabilized, apart from noncovalent bonds, by chemical bonds that are labile in 5% hydroxylamine solution.

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=> d his

     (FILE 'HOME' ENTERED AT 11:37:30 ON 08 JAN 2007)

     FILE 'BIOTECHDS, CAPLUS, EMBASE, MEDLINE, BIOSIS, SCISEARCH' ENTERED AT
     11:38:02 ON 08 JAN 2007
L1        65927 S CONCENTRAT? (5A) (MACROMOLECULE OR AGGLOMERATE OR MOLECULE OR
L2          404 S 11 AND (STABILI? (5A) DISPERSION)
L3            0 S L2 AND (INTERFACE LAYER)
L4            5 S L2 AND (INTERFACE OR PHASE-PARTITION? OR TWO-PHASE)

=> s l1 and (interface or phase-phartition? or two-phase or monolayer)
L5         2576 L1 AND (INTERFACE OR PHASE-PHARTITION? OR TWO-PHASE OR MONOLAYER
                )

=> s l5 and (dispersion or foam or emulsion)
L6          271 L5 AND (DISPERSION OR FOAM OR EMULSION)

=> dup rem l6
PROCESSING COMPLETED FOR L6
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L7 198 DUP REM L6 (73 DUPLICATES REMOVED)

=> s l7 and (DNA or protein or antigen or prion or (colloidal (3a) particle))
L8 11 L7 AND (DNA OR PROTEIN OR ANTIGEN OR PRION OR (COLLOIDAL (3A) PARTICLE))

=> d ibib abs l8 1-11

L8 ANSWER 1 OF 11 BIOTECHDS COPYRIGHT 2007 THE THOMSON CORP. on STN
ACCESSION NUMBER: 2004-13583 BIOTECHDS
TITLE: Preparing microparticle for delivery into cells and for treating diseases such as autoimmune disorder, blood disorder, involves forming water-in-oil-in-water emulsion to encapsulate an active agent e.g. nucleic acid;
micropaticle and antisense sequence for use in disease therapy and gene therapy
AUTHOR: NIEDZINSKI E J; CHEN Y; LIU Y; SHEU E; TUCKER S
PATENT ASSIGNEE: GENTERIC INC
PATENT INFO: WO 2004026453 1 Apr 2004
APPLICATION INFO: WO 2003-US27748 5 Sep 2003
PRIORITY INFO: US 2003-458661 28 Mar 2003; US 2002-408646 6 Sep 2002
DOCUMENT TYPE: Patent
LANGUAGE: English
OTHER SOURCE: WPI: 2004-340247 [31]
AN 2004-13583 BIOTECHDS
AB DERWENT ABSTRACT:
NOVELTY - Preparing particle by admixing 1st solution having active agent with organic solvent having encapsulation material to form emulsion that is admixed with amphiphilic binding molecule (I) to form amphiplex which is then admixed with 2nd solution having a stabilizing agent to form a particle, where (I) comprises 1st functionality having affinity for active agent, and second functionality that is soluble in same solvent as encapsulation material.

DETAILED DESCRIPTION - Preparing (M1) a particle involves admixing a first aqueous solution having an active agent (310) with an organic solvent (320) having an encapsulation material (301) to form an emulsion, admixing an amphiphilic binding molecule (I) (305,325) with the emulsion to form an amphiplex, and admixing the amphiplex with a second aqueous solution having a stabilizing agent to form a particle, where (I) comprises a first functionality and a second functionality, where the first functionality has an affinity for the active agent and the second functionality is soluble in the same solvent as the encapsulation material. INDEPENDENT CLAIMS are also included for the following: (1) a particle prepared according to (M1); (2) a particle (II), comprising an active agent optionally in an aqueous interior an (I), and an encapsulation material; (3) a delivery particle (III) comprising an inner core having an active agent an (I), and a polymeric outer layer, where (I) is situated between the inner core and the outer layer; and (4) retaining (M2) a material in a first phase of a two phase system, involves, providing (I) comprising a first functionality and a second functionality, where the first functionality has an affinity for the material in the first phase and the second functionality is soluble in a second phase, and where (I) is situated between the first phase and the second phase thereby retaining the material in the first phase.

BIOTECHNOLOGY - Preferred Method: The active agent is nucleic acid chosen from DNA, RNA, DNA/RNA hybrids, an antisense oligonucleotide, siRNA, a chimeric DNA-RNA polymer, a ribozyme, and a plasmid DNA. The encapsulation material is a hydrophobic polymer such as poly(lactid-co-glycolide), poly(lactic acid), poly(caprolactone), poly(glycolic-acid), poly(anhydrides), poly(orthoesters), poly(hydroxybutyric acid), poly(alkylcyanoacrylate, poly(lactides), poly(glycolides), poly(lactic acid-co-glycolic acid),

polycarbonates, polyesteramides, poly(amino acids), polycyanoacrylates, poly(p-dioxanone), poly(alkylene oxalate), biodegradable polyurethanes, or their blends or mixtures. The encapsulation material is optionally a hydrophilic polymer. (I) is a cationic lipid chosen from N,N-dioleyl-N,N-dimethylammonium chloride (DODAC), N-(2,3-dioleoyloxy)propyl)-N,N,N-trimethylammonium chloride (DOTMA), N,N-distearoyl-N,N-dimethylammonium bromide (DDAB), N-(2,3-dioleoyloxy)propyl)-N,N,N-trimethylammonium chloride (DOTAP), 1,2-dimyristoyl-sn-glycero-3-trimethylammonium-propane (DMTAP), 1,2-dipalmitoyl-sn-glycero-3-trimethylammonium-propane (DPTAP), 1,2-distearoyl-sn-glycero-3-trimethylammonium-propane (DSTAP), 3-(N-(N',N'-dimethylaminoethane)-carbamoyl)cholesterol (DC-Chol), N-(1,2-dimyristyloxyprop-2-yl)-N,N-dimethyl-N-hydroxyethyl ammonium bromide (DMRIE), 1,2-dilauroyl-P-O-ethylphosphatidylcholine (E-DLPC), 1,2-dimyristoyl-P-O-ethylphosphatidylcholine (E-DMPC), 1,2-dipalmitoyl-P-O-ethylphosphatidylcholine (E-DPPC) and their mixtures. Increasing (I) concentration decreases the diameter of the particle and increases encapsulation efficiency of the active agent. The longer hydrophobic domains of (I) decreases the diameter of the particle, and increases encapsulation efficiency of the active agent. The organic solution is chosen from hydrocarbon, alkane, halogenated alkane, acetone and petroleum ether. The stabilizing agent is chosen from polyvinyl alcohol, methylcellulose, hydroxyethyl cellulose, hydroxypropylmethylcellulose, gelatin, a carbomer, and a poloxamer. The particle is 0.01 microm-1000 microm in diameter. The method further involves lyophilizing the particle to form a delivery particle. In (M2), the first phase is a disperse phase and the second phase is immiscible in the first phase. The two phase system further comprises a third phase to generate a three phase system. The three phase system is water-in-oil-in-water (w1/o/w2) emulsion (230). The material is an active agent such as nucleic acid. Preferred Particle: (II) further comprises a stabilizing agent chosen from polyvinyl alcohol, methylcellulose, hydroxyethyl cellulose, hydroxypropylmethylcellulose, gelatin, a carbomer, and a poloxamer. The ratio of (I) to nucleic acid is 1:100-20:1, more preferably 6:1 w/w. The active agent is 0.002%-50%, preferably 0.01%-10% w/w of the encapsulation material. The particle has a diameter of 0.1 microm-50 microm, preferably 0.5 microm-10 microm. (II) further comprises an enteric coating. The nucleic acid comprises a sequence encoding a therapeutic protein chosen from interferon alpha, interferon beta, interferon gamma, and insulin, preferably interferon beta. The nucleic acid is operably linked to tissue-specific expression control sequence, where the tissue is intestinal epithelium or liver. Preferred Delivery Particle: The inner core is a disperse phase. The inner core comprises a disperse phase, an active ingredient, or a mixture of an outer layer and an active ingredient. The polymeric outer layer is an organic phase.

ACTIVITY - Antibacterial; Anti-HIV; Antiparasitic; Virucide; Fungicide; Neuroprotective; Antidiabetic; Hemostatic; Antianemic; Antianginal; Nootropic; Antiinflammatory; Antiparkinsonian; Anorectic; Antiasthmatic.

MECHANISM OF ACTION - Immune response inducer; Gene therapy. A mouse surgical model was used to simulate oral delivery of enteric coated DNA. After laparotomy, a needle was inserted through the intestinal wall and plasmid DNA was injected directly into the lumen of the duodenum. After several weeks, a significant antibody response that was specific to the protein encoded by the injected DNA was observed. Initial experiments used human growth hormone (hGH) as a model antigen because hGH is immunogenic in rodents. The average anti-hGH IgG titers exceeded 3.0x104, and were comparable to those observed in mice treated with subcutaneous injection of hGH protein.

USE - (III) is useful for inducing an immune response in a subject, where the active agent contained a particle is a nucleic acid that is operably linked to an tissue-specific expression control sequence,

preferably intestinal epithelium-specific control sequence. The nucleic acid encodes a protein chosen from a bacterial antigen , viral antigen, fungal antigen, and parasitic antigen. Preferably, the nucleic acid encodes a viral antigen such as HIV gp120 (all claimed). (III) is useful for delivering an active agent towards subject. (III) is also useful for treating a subject with disease chosen from autoimmune disorder (e.g. multiple sclerosis, diabetes, etc.), protein deficiency disorder (e.g. hemophilia, anemia, etc.), blood disorder, cardiovascular disorder (e.g. high blood pressure, angina, etc.), central nervous system disorder (e.g. Parkinson's disease, Alzheimer's disease, etc.), gastrointestinal disorder (e.g. inflammatory bowel disease, defective vitamin B12 absorption, etc.), metabolic disorder (e.g. obesity, dwarfism, etc.), neoplastic disease (e.g. colon cancer, lung cancer, etc.), pulmonary disorder (e.g. emphysema, asthma, etc.) or bacterial and viral disease.

ADMINISTRATION - (III) is administered orally (claimed). No specific clinical dosages are given.

ADVANTAGE - The method provides high encapsulation efficiency and controlled particle size. By using an amphiphilic binding molecule (ABM), it is possible, for e.g., to confine a hydrophilic active agent such as DNA, at the inner aqueous phase and to condense the active agent in a controllable manner.

EXAMPLE - An aqueous DNA solution (2 mg of plasmid DNA in 0.3 ml TE buffer) was added to a solution of polymer (50:50 PLG) in CH2Cl2 (6 ml) to form a water-in-oil (w/o) emulsion. The solution was emulsified by vortexing at 2500 rpm for 15 seconds. N-(2,3-dioleoyloxy)propyl)-N,N,N-trimethylammonium chloride (DOTAP) (12.5 mg) was added and the emulsion was mixed by vortexing (2500 rpm/15 second). The resulting emulsion was then added to an aqueous solution (8% polyvinyl alcohol (PVA), 100 ml) to form a water in oil in water (w/o/w) emulsion. The solution was allowed to stir until the oil layer (DH2Dl2) evaporated, resulting in a particle that encapsulated the inner water (DNA) layer. The particles were collected by centrifuging (1500 rpm, 15 minutes). The supernatant was decanted and the particles were washed with 70 ml of water. The process was repeated and the microparticles were transferred to a 20 ml vial and lyophilized. The particles were then collected and stored at 0degreesC. Results indicated that this formulation increased the encapsulation efficiency of DNA and decreased particle size. The effect of cationic lipid structure on encapsulation efficiency was determined by measuring the amount of DNA that remained in the supernatant/washes that were collected during the formulation process and the amount of DNA that was detected in the microparticles. The supernatant samples were prepared by diluting the supernatant samples with a 1% Zwittergent/TE buffer. The microparticle samples were analyzed by dissolving the microparticle coating with methylene chloride and then extracting the DNA with a 1% Zwittergent/TE buffer. The DNA concentration was determined using the Pico-Green reagents. The encapsulation efficiency was calculated for three different cationic lipids, 1,2-dimyristoyl-sn-glycero-3-trimethylammonium-propane (DMTAP), 1,2-dipalmitoyl-sn-glycero-3-trimethylammonium-propane (DPTAP), and 1,2-distearoyl-sn-glycero-3-trimethylammonium-propane (DSTAP), at two charge ratios by multiplying the concentration of DNA in the particles by the mass of the particles collected and dividing the product by the amount of DNA initially added to the formulation (250 microg). The results indicated that the encapsulation efficiency was influenced by lipid structure. After the particles were purified, the particle size was determined using light microscopy. The images demonstrate that the inclusion of a cationic lipid (ABM) such as DMTAP, DPTAP, or DSTAP into the formulation process results in a dramatic decrease in particle size. Moreover, the particle size was influenced by the chemical structure of ABM. The particle size decreased when ABM with longer hydrophobic domains are used in the formulation. (76 pages)

L8 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:877368 CAPLUS
DOCUMENT NUMBER: 138:85322
TITLE: Effects of Cholesterol on Surface Activity and Surface Topography of Spread Surfactant Films
AUTHOR(S): Diemel, Robert V.; Snel, Margot M. E.; van Golde, Lambert M. G.; Putz, Guenther; Haagsman, Henk P.; Batenburg, Joseph J.
CORPORATE SOURCE: Departments of Biochemistry and Cell Biology and of Science of Food of Animal Origin, Graduate School of Animal Health, Faculty of Veterinary Medicine, Utrecht University, Utrecht, 3508 TD, Neth.
SOURCE: Biochemistry (2002), 41(50), 15007-15016
CODEN: BICHAW; ISSN: 0006-2960
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Pulmonary surfactant forms a monolayer of lipids and proteins at the alveolar air/liquid interface. Although cholesterol is a natural component of surfactant, its function in surface dynamics is unclear. To further elucidate the role of cholesterol in surfactant, we used a captive bubble surfactometer (CBS) to measure surface activity of spread films containing dipalmitoylphosphatidylcholine/1-palmitoyl-2-oleoylphosphatidylcholine/1-palmitoyl-2-oleoylphosphatidylglycerol (DPPC/POPC/POPG, 50/30/20 M percentages), surfactant protein B (SP-B, 0.75 mol %), and/or surfactant protein C (SP-C, 3 mol %) with up to 20 mol % cholesterol. A cholesterol concn. of 10 mol % was optimal for reaching and maintaining low surface tensions in SP-B-containing films but led to an increase in maximum surface tension in films containing SP-C. No effect of cholesterol on surface activity was found in films containing both SP-B and SP-C. Atomic force microscopy (AFM) was used, for the first time, to visualize the effect of cholesterol on topog. of SP-B- and/or SP-C-containing films compressed to a surface tension of 22 mN/m. The protrusions found in the presence of cholesterol were homogeneously dispersed over the film, whereas in the absence of cholesterol the protrusions tended to be more clustered into network structures. A more homogeneous dispersion of surfactant lipid components may facilitate lipid insertion into the surfactant monolayer. Our data provide addnl. evidence that natural surfactant, containing SP-B and SP-C, is superior to surfactants lacking one of the components, and furthermore, this raises the possibility that the cholesterol found in surfactant of warm-blooded mammals does not have a function in surface activity.
REFERENCE COUNT: 59 THERE ARE 59 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2001:589168 CAPLUS
DOCUMENT NUMBER: 136:25594
TITLE: Microemulsion polymerization of styrene in the presence of a cationic emulsifier
AUTHOR(S): Capek, I.
CORPORATE SOURCE: Polymer Institute, Slovak Academy of Sciences, Bratislava, 842 36, Slovakia
SOURCE: Advances in Colloid and Interface Science (2001), 92(1-3), 195-233
CODEN: ACISB9; ISSN: 0001-8686
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review. The principal subject discussed in the current paper is the radical polymerization of styrene in the three- and four component microemulsions

stabilized by a cationic emulsifier. Polymerization in the o/w microemulsion is a new polymerization technique which allows to prepare the polymer latexes with the very high particle interface area and narrow particle size distribution. Polymers formed are very large with a very broad mol. weight distribution. In emulsion and microemulsion polymns., the reaction takes place in a large number of isolated loci dispersed in the continuous aqueous phase. However, in spite of the similarities between emulsion and microemulsion polymerization, there are large differences caused by the much larger amount of emulsifier in the latter process. In the emulsion polymerization there are three rate intervals. In the microemulsion polymerization only two reaction rate intervals are commonly detected: 1st, the polymerization rate increases rapidly with the reaction time and then decreases steadily. Essential features of microemulsion polymerization are as follows: (1) polymerization proceeds under nonstationary state conditions; (2) size and particle concn. increases throughout polymerization; (3) chain-transfer to monomer/exit of transferred monomeric radical/radical reentry events are operative; and (4) mol. weight is independent of conversion and distribution of resulting polymer is very broad. The number of microdroplets or monomer-starved micelles at higher conversion is high and they persist throughout the reaction. The high emulsifier/water ratio ensures that the emulsifier is undissociated and can penetrate into the microdroplets. The presence of a large amount of emulsifier strongly influences the reaction kinetics and the particle nucleation. The mixed mode particle nucleation is assumed to govern the polymerization process. At low emulsifier concentration the micellar nucleation is dominant while at a high emulsifier concentration the interaction-like homogeneous nucleation is operative. Also, the paper is focused on the initiation and nucleation mechanisms, location of initiation locus, and growth and deactivation of latex particles. Also, the relation between kinetic and mol. weight parameters of the microemulsion polymerization process and colloidal (water/particle interface) parameters is discussed. In particular, the authors follow the effect of initiator and emulsifier type and concentration on the polymerization process. Besides, the effects of monomer concentration and additives are also evaluated.

REFERENCE COUNT: 58 THERE ARE 58 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:267775 CAPLUS
DOCUMENT NUMBER: 129:66971
TITLE: Competitive adsorption between egg yolk lipoproteins and whey proteins on oil-in-water interfaces
AUTHOR(S): Aluko, Rotimi E.; Keeratiurai, Maneephan; Mine, Yoshinori
CORPORATE SOURCE: Department of Food Science, University of Guelph, Guelph, ON, N1G 2W1, Can.
SOURCE: Colloids and Surfaces, B: Biointerfaces (1998), 10(6), 385-393
CODEN: CSBBEQ; ISSN: 0927-7765
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Adsorption characteristics of mixts. of egg yolk lipoproteins and whey protein isolate (WPI) were studied in emulsions (20% oil, volume/volume 0.5% protein, w/v pH 7.0) made with pure triolein or n-tetradecane. Emulsions stabilized by granule lipoproteins (GLP) or low-d. lipoproteins (LDL) had smaller particle sizes than emulsions

stabilized by WPI. In protein mixts. containing egg yolk lipoproteins and WPI, there was a decrease in particle size with increased concn. of the yolk lipoproteins. The reduction in particle size of emulsions was greater when WPI was mixed with LDL than with GLP, for both n-tetradecane and triolein. Emulsions made with triolein had smaller particle sizes than those made with n-tetradecane, irresp. of the type or ratio of lipoproteins used. Therefore, the protein concentration per unit area of the interface was greater for emulsions containing n-tetradecane than for triolein. In displacement expts., emulsions made with only WPI were mixed with 0.1 and 0.5% GLP or LDL for a given period of time and the relative concns. of β-lactoglobulin and α-lactalbumin determined Displacement of β-lactoglobulin by LDL increased with time and was greater in emulsions made with n-tetradecane than with triolein. However, displacement of β-lactoglobulin by GLP was greater in emulsions made with triolein than with n-tetradecane. α-Lactalbumin was completely displaced from the interface within 1 min of addition of either 0.5% GLP or LDL, whereas addition of 0.1% GLP or LDL resulted only in a partial displacement. The results suggest that egg yolk lipoproteins are more surface active than WPI and that LDL penetrates the n-tetradecane-water interface more than GLP, while GLP penetrates the triolein-water interface more than LDL.

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:516343 CAPLUS
DOCUMENT NUMBER: 125:223139
TITLE: Some colloid-chemical features of emulsion polymerization
AUTHOR(S): Tauer, K.; Kuehn, I.; Kaspar, H.
CORPORATE SOURCE: Max-Plank-Institut Koloid- Grenzflaechenforschung, Teltow-Seehof, D-14513, Germany
SOURCE: Progress in Colloid & Polymer Science (1996), 101(Interfaces, Surfactants and Colloids in Engineering), 30-37
CODEN: PCPSD7; ISSN: 0340-255X
PUBLISHER: Steinkopff
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Two colloidal features, namely particle nucleation and swelling of polymer particles with monomer, are considered in detail. The particle nucleation can be described with a model based on the classical nucleation theory. This consideration is able to predict the chain length of the nucleating oligomers which is mainly influenced by the water solubility of the oligomers. With increasing water solubility the chain length of the nucleating oligomers becomes longer in good accordance with exptl. findings. The activation energy of nucleation turned out to be a crucial parameter for further theor. developments on particle nucleation in emulsion polymerization With a new developed exptl. set-up based on a combination of online transmission and conductivity measurement with off-line particle size analytic it is possible to investigate the nucleation period. The results indicate a strong influence of the emulsifier concn. on the particle concn. time curves in the very early stages of an emulsion polymerization Swelling expts. were performed wit toluene and latexes carrying chemical different stabilizing groups. The latexes have been cleaned by ultrafiltration before use. The results prove the enormous influence of the nature of the particle-water interface on the swelling capability of the particles. It is concluded that the Morton-Kaizerman-Altier equation cannot be applied for a complete description of latex particle swelling.

L8 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:392625 CAPLUS

DOCUMENT NUMBER: 125:87576
TITLE: Long-range electrostatic attraction between macroions mediated by oppositely charged counterions: experimental supports, past and present
AUTHOR(S): Ise, Norio
CORPORATE SOURCE: Central Lab., Rengo Co., Ltd., Osaka, 553, Japan
SOURCE: Berichte der Bunsen-Gesellschaft (1996), 100(6), 841-848
CODEN: BBPCAX; ISSN: 0940-483X
PUBLISHER: VCH
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB Recent exptl. observations are reviewed with 44 refs., which testify to the existence of electrostatic attraction between colloidal particles. The ultra-small-angle X-ray scattering technique shows five orders of Bragg diffraction for colloidal silica particle dispersions, indicating that a (bcc) single crystal of a lattice constant of 3000 A is formed. The closest interparticle spacing can be accurately determined and is definitely smaller than the average spacing calculated from the particle concn. This implies that contraction takes place during crystallization and the dispersion is no longer homogeneous but contains the single crystal, voids and/or free particles. Two types of symmetries, six-fold and four-fold, are observed from the same dispersion with {110} planes (most densely packed planes of the bcc structure) parallel to the capillary surface. This implies that the presumably neg. charged surface does not repel the anionic particles but actually attracts them. The void formation, which is a direct evidence of the attraction, is further confirmed for rather small latex particles under the d.-matched condition. Furthermore, the same latex particles are found to show the macroscopic vapor-liquid condensation when the d. difference between the particles and the medium is not adjusted. These two phenomena are thermodynamically the same. The results are analyzed in terms of the Sogami potential. The recent measurements of interparticle potential are critically reviewed. It is pointed out that only rather short distances are covered in the surface-force measurements and the atomic force microscopy so that the long-range attraction in question cannot be detected. A method based on the determination of the distribution function demonstrates the presence of a long-range attraction in addition to the widely accepted repulsion, and the results are successfully reproduced by the Sogami potential. The pos. adsorption of ionic entities near like-charged interface is in direct contradiction to the standard double-layer interaction theory and shows the presence of electrostatic attraction between the interface and particles. The attraction is generated through the intermediary of counterions present in the space between particles or between particles and plate. Considering the nature of the Sogami treatment, it is proposed to call the attraction the counterion-mediated Gibbs attraction.

L8 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1993:493865 CAPLUS
DOCUMENT NUMBER: 119:93865
TITLE: Effect of protein and oil concentration on the emulsion stability of soy protein isolate
AUTHOR(S): Hwang, Jaekwan; Kim, Young Sook; Pyun, Yu Ryang
CORPORATE SOURCE: Korea Food Res. Inst., Kyonggido, 463-420, S. Korea
SOURCE: Han'guk Nonghwa Hakhoechi (1992), 35(6), 457-61
CODEN: JKACA7; ISSN: 0368-2897
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The emulsion stabilizing properties of soy protein isolate (SPI) were investigated in terms of the protein and oil concentration Particularly, the dependence of emulsion stability on

the oil particle size and viscosity of emulsion was studied in conjunction with the adsorption pattern of protein onto the water/oil interface during emulsification. The data showed that increasing protein concn. decreased the oil particle size and increased the emulsion viscosity, resulting in enhanced emulsion stability. By contrast, increasing oil concn. increased both the oil particle size and the emulsion viscosity, and thus emulsion stability varied depending on which factor predominated in the overall emulsion system.

L8 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1984:517391 CAPLUS
DOCUMENT NUMBER: 101:117391
TITLE: Striction mechanism of the foam concentration of colloids
AUTHOR(S): Maslov, V. N.
CORPORATE SOURCE: Mosk. Inst. Khim. Mashinostr., Moscow, USSR
SOURCE: Kolloidnyi Zhurnal (1984), 46(4), 700-5
CODEN: KOZHAG; ISSN: 0023-2912
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The main factor causing concentration of colloid particles in protein foams is a rapid contraction (striction) of the liquid-gas interface when the foam bubbles disintegrate. The network of the surface two-dimensional gel of gelatin or other protein, which undergoes compacting in the process of striction, entraps the colloid particles and makes them approach one another, thus increasing their surface concentration A freshly formed gelatin foam is impoverished in the colloid ferrous hydroxide as compared with the initial solution The obtained exptl. linear dependence of the coefficient of concentration of ferrous hydroxide in foam on the logarithm of the foam column existence time is in agreement with an equation which has been derived in the assumption of the striction mechanism of concentration

L8 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1970:96705 CAPLUS
DOCUMENT NUMBER: 72:96705
TITLE: Study of the spread and adsorbed films of milk proteins
AUTHOR(S): Mitchell, John R.; Irons, Laurence; Palmer, Graham J.
CORPORATE SOURCE: Unilever Res. Lab., Welwyn, UK
SOURCE: Biochimica et Biophysica Acta, Protein Structure (1970), 200(1), 138-50
CODEN: BBPTBH; ISSN: 0005-2795
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The spread and adsorbed surface films of some caseins and whey proteins were examined at the air-water interface. The pressure-area isotherms of spread films were compared with pressure-concentration isotherms, which were obtained by adding an increasing amount of protein to constant surface area. Pressure-area isotherms were generally unaffected by changes in the structure of the spread mol., while pressure-concn. isotherms were sensitive to changes in protein structure. The adsorption studies suggested that disordered proteins were more surface active than globular proteins. The surface pressure characteristics of the adsorbed films were compared with the pressure-area and pressure-concentration isotherms. It was concluded that pressure-concentration spread films are similar to adsorbed films. Both pressure-concentration isotherms and adsorption behavior reflect the magnitude of the forces preventing the mol. unfolding at the surface and can be used to provide information about protein structure.

L8 ANSWER 10 OF 11 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 2004:745685 SCISEARCH
THE GENUINE ARTICLE: 844TJ
TITLE: Hydrophobic interactions in concentrated colloidal suspensions: A rheological investigation
AUTHOR: Ametov I; Prestidge C A (Reprint)
CORPORATE SOURCE: Univ S Australia, Ian Wark Res Inst, ARC Special Res Ctr Particle & Mat Interfaces, Mawson Lakes, SA 5095, Australia (Reprint)
clive.prestidge@unisa.edu.au
COUNTRY OF AUTHOR: Australia
SOURCE: JOURNAL OF PHYSICAL CHEMISTRY B, (12 AUG 2004) Vol. 108, No. 32, pp. 12116-12122.
ISSN: 1520-6106.
PUBLISHER: AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036 USA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 55
ENTRY DATE: Entered STN: 10 Sep 2004
Last Updated on STN: 15 Jun 2006

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Rheological investigations have determined the influence of particle hydrophobicity and solution pH on particle interactions in concentrated suspensions of colloidal silica (advancing water particle contact angles in the range similar to35degrees to similar to90degrees have been explored and obtained through surface chemical modification). Suspensions of hydrophilic silica (phi = 0.55) showed negligible viscoelasticity and a pH dependent apparent yield stress. The inverse relationship between the yield stress and the particle zeta-potential squared confirmed that electrical double layer and dispersion forces control particle interactions. On increasing the particle contact angle of silica there is a substantial increase in suspension rheology, i.e., pronounced viscoelasticity and apparent yield stresses, thus suggesting the action of an attractive hydrophobic force. Attempts have been made to deconvolute the various interaction forces, quantify the hydrophobic interaction, and explain the apparent pH dependent non-DLVO behavior.

L8 ANSWER 11 OF 11 SCISEARCH COPYRIGHT (c) 2007 The Thomson Corporation on STN

ACCESSION NUMBER: 1998:210985 SCISEARCH
THE GENUINE ARTICLE: ZA685
TITLE: Direct observation of the dynamics of latex particles confined inside thinning water-air films
AUTHOR: Velikov K P (Reprint); Durst F; Velev O D
CORPORATE SOURCE: Univ Sofia, Lab Thermodynam & Physicochim Hydrodynam, Fac Chem, J Bouchier Ave 1, BU-1126 Sofia, Bulgaria (Reprint); Univ Sofia, Lab Thermodynam & Physicochim Hydrodynam, Fac Chem, BU-1126 Sofia, Bulgaria
COUNTRY OF AUTHOR: Bulgaria
SOURCE: LANGMUIR, (3 MAR 1998) Vol. 14, No. 5, pp. 1148-1155.
ISSN: 0743-7463.
PUBLISHER: AMER CHEMICAL SOC, 1155 16TH ST, NW, WASHINGTON, DC 20036 USA.
DOCUMENT TYPE: Article; Journal
LANGUAGE: English
REFERENCE COUNT: 37
ENTRY DATE: Entered STN: 1998
Last Updated on STN: 1998

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB The dynamics of micrometer-size polystyrene latex particles confined in thinning foam films was investigated by microscopic

interferometric observation. The behavior of the entrapped particles depends on the mobility of the film surfaces, the particle concentration, hydrophobicity, and rate of film formation. When the films were stabilized by sodium dodecyl sulfate, no entrapment of particles between the surfaces was possible. When protein was used as a stabilizer, a limited number of particles were caught inside the film area due to the decreased mobility of the interfaces. In this case, extraordinary long-ranged(> 100 mu m) capillary attraction leads to two-dimensional (2D) particle aggregation. A major change occurs when the microspheres are partially hydrophobized by the presence of cationic surfactant. After the foam films are opened and closed a few times, a layer of particles simultaneously adsorbed to the two interfaces is formed, which sterically inhibits any further film opening and thinning. The particles within this layer show an excellent 2D hexagonal ordering. The experimental data are relevant to the dynamics of defects in coating films, Pickering emulsions, and particle assembly into 2D arrays.

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ATE: Monday, January 08, 2007

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☐	L2	(stabiliz$ near dispersion) or (dispersion near foam) or (dispersion near emulsion)	323
☐	L3	L2 same interface layer	
☐	L4	L2 and interface layer	
☐	L5	L1 AND L2	8
☐	L6	L5 AND (L3 OR L4)	
☐	L7	L4 AND (INJECTION OR (GAS$ NEAR JET$) OR (CAPILLARY NEAR JET$))	
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☐	L11	L4 and ((CHEMICAL near AFFINITY) OR (ELECTRIC NEAR POLARIZATION) OR (CHemical near polarization) or ionization)	
☐	L12	L11 and (nucleic acid or protein or antigen or antibod$ or prion)	
☐	L13	L5 and (interface near layer)	
☐	L14	L13 and (nucleic acid or protein or antigen or antibod$ or prion)	
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☐	L16	20030170893 and (affinity or polarization or ionization)	
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☐	L18	20030170893	
☐	L19	L18 and DNA	
☐	L20	L19 and (lipid or biotin$ or avidin)	
☐	L21	L20 and purif$	
☐	L22	L19 and amplif$	
☐	L23	L5 and amplif$	
☐	L24	L23 and (lipid or biotin$ or avidin)	
☐	L25	L24 and prion	

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